# Muhammad Aswan **Syahputra**

DATA ANALYST · SENSOMETRICS SPECIALIST

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*I would like to recognize myself as a Food Data Scientist. I have an expertise in Sensory Science with a Food Technology background, a passion in data analysis and visualisation, an eagerness in R statistical programming, and a hobby in developing analytical web application.*

## Work

**Jabar Digital Service**                                                                 *Bandung, Indonesia*

DATA ANALYST                                                                           *Nov 2019 – Present*

- Gather insight from sectoral data to support decision and policy making
- Optimise the budget and resource allocation within government
- Improve the quality of digital products that tailored for government and public use

**Sensolution.ID – Food Sensory and Sensometrics Consulting**            *Bandung, Indonesia*

SENSOMETRICS SPECIALIST                                                                 *Nov 2018 – Present*

- Develop a software for sensory data collection and analyses.
- Deliver training to clients for advance sensory methods and analyses.
- Assist clients to arrange, design, and perform sensory research.

**R Academy of Telkom University**                                                      *Bandung, Indonesia*

INSTRUCTOR                                                                             *May 2019 – Present*

- Design syllabus for R training courses.
- Deliver training for R courses, including: introduction to R for data science, data visualisation in R, machine learning in R, fundamental tidy data science in R.

**Sensory and Applied Food Research Group at Universitas Brawijaya**      *Malang, Indonesia*

INTERN                                                                                 *Apr 2018 – Jul 2018*

- Developed prototype of a new software for sensory data analyses.
- Delivered lectures to students in sensory evaluation and methods course.
- Conducted research to compare users' experience between two different softwares when performing sensory data analyses.

**Research Consultancy and Data Analysis Services**                   *Indonesia – The Netherlands*

INDEPENDENT FREELANCE                                                                   *2014 – Present*

- Assisted clients to properly choose and design an appropriate food research.
- Assisted clients to learn and analyse data collected from food research.
- Developed an analytical software to help clients analysing data.

**Indonesian Coffee and Cocoa Research Institute (ICCRI)**                   *Jember, Indonesia*

INTERN                                                                                 *Dec 2013 – Feb 2014*

- Assisted and prepared the procedure to evaluate sensory characteristic of specialty coffee.
- Assisted sensory evaluation of chocolate products

**Faculty of Agricultural Technology, Universitas Brawijaya**              *Malang, Indonesia*

ASSISTANT FOR LABORATORY PRACTICUM                                                      *2012 – 2015*

- Prepared syllabus for laboratory practicum.
- Assisted, supervised, and evaluated students performance during laboratory works.
- Laboratory of Sensory Analysis, Laboratory of Post-harvest Processing Technology, and Laboratory of Chemistry.

## Education

**Wageningen University and Research**                                    *Wageningen, The Netherlands*

MASTER IN FOOD TECHNOLOGY, SENSORY SCIENCE SPECIALISATION                                *2016-2018*

- Thesis: "Observation of Chewing Activity using Photoplethysmography (PPG) method". Supervisors: Monica Mars and Chirstos Diou.
- Internship: "Development of SenseHub: an integrated web application for sensory analyses". Supervisors: Kiki Fibrianto and Betina Piqueras-Fiszman.
- Excelled in: Advance Sensory Science and Sensometrics (MCB-32806), Integrated Sensory Science (MCB-33306), Instrumental Sensory Science (HNE-30606), Product and Process Design (FQD-60312), and Advance Statistics (MAT-20306).
- Granted with Indonesian Education Scholarship from Indonesia Endowment Fund of Education (LPDP).
- CGPA of 7.53/10.00.

### Universitas Brawijaya
*Malang, Indonesia*

Bachelor in Agricultural Product Technology, Food Science and Technology program
*2011-2015*

- Thesis: "Exploratory study: the influence of iced-coffee drinking methods to consumers' multisensory perception utilizing Rate-all-that-Apply (RATA) method". Supervisors: Kiki Fibrianto and Indria Purwantiningrum.
- Internship: "Sensory evaluation of specialty coffee using cups tasting procedure". Supervisors: Kiki Fibrianto and Yusianto.
- Excelled in: Food Product Development and Sensory Evaluation, Food Processing Technology, and Statistic and Computation.
- Granted with PPA Scholarship from Ministry of Research, Technology and Higher Education of Indonesia.
- CGPA of 3.80/4.00.

# External Activity

### Komunitas R Indonesia
*Indonesia*

Initiator
*2016 – Present*

- Komunitas R Indonesia is a non-profit community for Indonesian to learn and share knowledge about R statistical programming language. I initiated this community back in 2016 and now it has more than 1000 members came from cities in Indonesia. Aside from managerial activity, in several occasions I also gave presentation and training to the members during community meetup. Additionally, I share my knowledge about R programming in Youtube video in hope that it can be beneficial to broader audience.

### Association of Indonesian Education Scholarship Awardee in Wageningen University and Research
*Wageningen, The Netherlands*

Coordinator
*Sep 2016 – Sep 2017*

- The massive number of Indonesian scholarship awardee in Wageningen University and Research introduces challenge in communication, sharing of information, and management between students and Indonesian government. I took an initiative and an opportunity to help both students and Indonesian government to face these challenges. Furthermore, I also assisted the students who had issues or problems in studying, financial, administration, and daily life.

### Food Sensory Research Group Universitas Brawijaya
*Malang, Indonesia*

Member and Data Analyst
*2015 – Present*

- Food Sensory Research Group was the first student group in Universitas Brawijaya that focused in sensory science and research. In this group we constantly have discussion about new issues in sensory science, advance sensory methods, how to handle complexity in data, and practical applications of sensory science in Food Technology domain.

### Himpunan Mahasiswa Teknologi Hasil Pertanian (HIMALOGISTA) Universitas Brawijaya
*Malang, Indonesia*

Tutor for Students
*2012 – 2014*

- I volunteered to help and assist students in studying several courses taught in Food Science and Technology department, including: Fundamentals of Food Process Engineering, Food Process Engineering, Research Methodology and Experimental Design, and Statistics and Computation.

# Research

### Thermostats: an Open Source Shiny App for Your Open Data Repository
*Padang, Indonesia*

JOIV : International Journal on Informatics Visualization
*2019*

- Researchers: Dasapta Erwin Irawan, Muhammad Aswan Syahputra, Prana Ugi, Deny Juanda Puradimaja
- In this research we collected water quality from 416 geothermal sites across Indonesia and built an analytical, data-driven, and user-focused online application for analyzing geothermal water quality

### Consumer Preference and Satisfaction Analysis on Croissant in Malang Area
*Selangor, Malaysia*

Kuala Lumpur International Agriculture, Forestry & Plantation Conference (KLIAFP)
*2018*

- Researchers: Jaya Mahar Maligan, Yuke Pamelasari, Muhammad Aswan Syahputra.
- In this research we investigated various external product properties that may give contribution to consumer preference and satisfaction. By using External Preference Mapping method, we were able to discover the perceptual mapping of various Croissant brands and the segmentation of consumers group.

### SenseHub: an integrated web application for sensory analyses
*Malang, Indonesia*

International Coference on Green Agroindustry and Bioeconomic (ICGAB)
*2018*

- Researchers: Muhammad Aswan Syahputra, Kiki Fibrianto, Eka Shinta Wulandari.
- In this research we compared the users' experience when using generic statistical software versus SenseHub for performing sensory data analyses. SenseHub is a web application that was developed by the author to make sensory data analysis easier while embedded with plenty of state-of-the-art sensometrics procedures.

### Observation of Chewing Activity using Photoplethysmography (PPG) Method
*Wageningen, The Netherlands*

Master Thesis at Wageningen University and Research
*2018*

- Researchers: Muhammad Aswan Syahputra, Monica Mars, Christos Diou.
- In this research we developed algorithms to monitor chewing activity during eating solid and semi-solid foods using a new sensor, Photoplethsmography (PPG). We measured the performance of the proposed algorithms and made comparison with the existing procedures for monitoring chewing, i.e. video recording analysis and Electro Myography (EMG) method.

**Effects of Delivery Methods to Multisensory Perceptions: a Review** *Malang, Indonesia*

Jurnal Pangan dan Agroindustri *2016*

- Researchers: Muhammad Aswan Syahputra, Kiki Fibrianto, Indria Purwantiningrum.
- In this concise review article we were discussing the possible effect of delivery methods of food and drink to multisensory perceptions during eating.

**Exploratory Study: the Influence of Instant Iced-Coffee Drinking Methods to Consumers'** *Malang, Indonesia*
**Multisensory Perceptions Utilizing Rate-all-that-Apply (RATA) Method**

Bachelor Thesis at Universitas Brawijaya *2015*

- Researchers: Muhammad Aswan Syahputra, Kiki Fibrianto, Indria Purwantiningrum.
- In this research we asked participants to consume iced-coffee in three ways: drinking using straw; immediate drinking from the glass; and tasting using spoon. We discovered that the difference in drinking method may alter consumers' multisensory perception during drinking.

## Delivered Presentation and Training

**Extending RStudio with git and GitHub** *Bandung, Indonesia*

Komunitas R Indonesia meetup at School of Business and Management, Bandung Institute of Technology *31 August 2019*

- Introduction to version control system, benefit of using git and GitHub for data science project, how to integrate RStudio with git and GitHub, workflow of using git and GitHub from RStudio

**Data rectangling in R: a journey from JSON to CSV** *Yogyakarta, Indonesia*

Komunitas R Indonesia meetup at Sadasa Academy *16 August 2019*

- Data structure in R, subsetting elements of data object, functional iteration in R, importing JSON to R, transforming JSON structure into tabular data object

**Fundamental tidy data science in R** *Bandung, Indonesia*

Public workshop at R Academy Telkom University *26-27 July 2019*

- Introduction to Tidyverse for tackling data science problems, machine learning principle and workflow, case study supervised learning: predicting numbers and classes, case study unsupervised learning: topic modeling for texts, building a web application for interactive data visualization, deploying machine learning models into a web application

**Translating consumer voice for market insight: an introduction to sensory science** *Bandung, Indonesia*

Internal workshop at School of Business and Management, Bandung Institute of Technology *5 July 2019*

- Sensory science and its domain, application of sensory science, simulation of sensory research, demonstration of sensory data analysis

**Bootcamp R for data science** *Bandung, Indonesia*

Public workshop at R Academy Telkom University *20-24 May 2019*

- R essentials, working with version control system, data science workflow using tidyverse in R, machine learning and statistics, and case study of common machine learning problems

**Data carpentry with tidyverse** *Jakarta, Indonesia*

Komunitas R Indonesia meetup at Algoritma Education Center *11 May 2019*

- Definition of data carpentry for handling data, common functions for data transformation, scrapping and cleaning data from webpage

**Mastering data visualisation** *Bandung, Indonesia*

Public workshop at R Academy Telkom University *13 April 2019*

- Introduction to Grammar of Graphics, building a graph layer by layer, creating various types of data visualisation and customisation, manipulating graph looks and feels

**R introduction for data science** *Bandung, Indonesia*

Public workshop at R Academy Telkom University *6 April 2019*

- R fundamentals, importing data from various sources, performing data manipulation, creating data visualisation, and building models and iteration

**Let's build your first RStudio snippets and addins** *Jakarta, Indonesia*

Komunitas R Indonesia meetup at Perbanas Institute *23 March 2019*

- Make use of RStudio snippets to write common codes, introduction to addins, writing custom code snippets, and creating an R package containing addins

**Introduction to R (+) for data science** *Bandung, Indonesia*

Komunitas R Indonesia meetup at Telkom University *22 February 2019*

- Introduction to R, empowering R with RStudio+git, glimpse of tidyverse packages collection, chaining multiple operations in R, and practical activity on analysing Indonesia presidential election data

**R (+) for data science** *Bandung, Indonesia*

Datascientalk HIMATIKA Bandung Institute of Technology *26 January 2019*

- R as statistical programming language, RStudio as IDE, git+GitHub as version control system, and tidyverse for data science activity

**R+RStudio tips and tricks:hidden gems to improve workflow** *Jakarta, Indonesia*

Komunitas R Indonesia meetup at Microsoft Indonesia *19 January 2019*

- Trivia in R statistical programming language, guidelines for coding style, advices on how to setup R project, helpful RStudio shortcuts and tricks to improve workflow

**Workshop for sensory data analyses**                                    *Bogor, Indonesia*

<span style="font-variant:small-caps">Internal workshop at Department of Food Science and Technology, Bogor Agricultural University</span>    *19-20 December 2019*

- Conventional and advance sensory methods, statistical approach for analysing sensory data, and practical on how to analyse sensory data from various sensory methods using R and SenseHub

**R in food sensory research**                                            *Bandung, Indonesia*

<span style="font-variant:small-caps">Komunitas R Indonesia meetup at Bandung Institute of Technology</span>    *15 November 218*

- Application of R for linking food properties and consumer preference, food production optimisation, and detection of chewing activity

**SenseHub: an integrated web application for sensory analyses**          *Malang, Indonesia*

<span style="font-variant:small-caps">International Coference on Green Agroindustry and Bioeconomic (ICGAB)</span>    *19 September 2018*

- Research methods in sensory science, discussion of available software for sensory analyses, proposal of new sensory software named SenseHub and its comparison with existing statistical software

## Developed Software

**R package** Syahputra, MA. (2019). jabr: an R interface for accessing Open Data Jawa Barat.

**R package** Syahputra, MA. (2019). sensehubr: a tidy tools for sensory data analysis.

**R package** Syahputra, MA. (2019). bandungjuara: an R interface for accessing Open Data Kota Bandung.

**R package** Syahputra, MA. (2019). jakartaraya: an R interface for accessing Open Data Kota Jakarta.

**R package** Syahputra, MA. (2019). nusandata: a curated datasets about Indonesia.

**Web apps** Syahputra, MA. (2019). SenseQuest: an web application for sensory data collection.

**Web apps** Syahputra, MA. (2018). SenseHub: an integrated web application for sensory analysis.

**Web apps** Irawan, DE., Syahputra, MA. (2018). Aquastats: a web application for groundwater data analyses.

**Web apps** Irawan, DE., Syahputra, MA. (2018). Thermostats: a web application for hot water data analyses.

**Web apps** Syahputra, MA. (2018). MCDM: a shiny application for performing Multiple Criteria Decision Making (MCDM).